

ABSTRACT

5 An electrical device in which an element composed of a conductive polymer composition is positioned in contact with the first surface of a metal electrode, the first surface having a center line average roughness R_a and a reflection density RD, the product R_a times RD being 0.5 to 1.6 μm . The conductive polymer composition preferably exhibits PTC behavior. In a second embodiment an electrical device has an element composed of a
10 conductive polymer composition in contact with the first surface of a metal electrode produced by providing a base metal foil having an R_a of at most 0.45 μm and depositing material onto the base metal foil to form a first surface having a product of R_a times RD of at least 0.14 μm . Other embodiments include electrical devices with metal electrodes made by pulse plating processes, and metal electrodes made by electrodeposition under diffusion-
15 limited conditions. The electrical devices may be circuit protection devices and have improved electrical and physical properties.